\_\$2

PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	LLL LLL LLL LLL LLL LLL LLL LLL LLL LL	RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR		<pre>LLL LLL LLL LLL LLL LLL LLL LLL LLL LL</pre>
PPP PPP		RRR RRR RRR RRR	††† †*†	

PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP			GGGGGGGG GGGGGGGG GG GG GG GG GG GG GG	TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	LL LL LL LL LL LL LL LL LL LL	••••
LL LL LL LL LL LL LL LL LL LL LL LL LL		\$					

allocated.

0000 0000

0000

0000 .title pli\$getfile - pli runtime get file
.ident /1-003/ 0000 ; Edit CGN1003 0000 : Edit WHM1002 0000 0000 0000 ŎŎŎŎ ŎŎČŎ COPYRIGHT (c) 1978, 1980, 1982, 1984 BY DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS. ŎŎŎŎ ŎŎŎŎ 10 ALL RIGHTS RESERVED. 0000 11 ŎČŎŎ 12 THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED ŎŎŎŎ ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER 0000 0000 15 COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY 0000 OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY ìŽ 0000 TRANSFERRED. 0000 0000 19 THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE ČÕÕÕ 2222222222223333333333333333 AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT 0000 CORPORATION. 0000 0000 DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS 0000 SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL. 0000 0000 ŎŎŎŎ 0000 ČÕÕÕ 0000 0000 0000 0000 0000 0000 0000 0000 ; facility: VAX/VMS PL1 runtime library. abstract: This module contains the pl1 runtime routine for initializing the runtime system to perform a get from a pl1 stream file. 40 41 42 445 0000 author: c. spitz 4-oct-79 0000 0000 modified: 0000 ŎŎŎŎ 46 ŎŎŎŎ 1-002 Bill Matthews 29-September-1982 0000 48 ŎŎŎŎ Invoke macros \$defdat and rtshare instead of \$defopr and share. 0000 50 51 52 53 55 55 55 57 0000 1-003 Chip Nylander 08-August-1983

Initialize the parent pointer with FP when stream block

Sy

AT

C 5

```
PLISGETFILE
1-003
```

```
- pli runtime get file
```

```
16-SEP-1984 02:20:03 VAX/VMS Macro V04-00 Page 6-SEP-1984 11:38:23 [PLIRTL.SRC]PLIGETFIL.MAR;1 (
```

```
0000
                          0000
                                       ; pli$getfile_r6 -- get elements from a stream file
                                   76
77
                          0000
                          0000
                                         functional description:
                          0000
                                   78
                          0000
                                   79
                                         This routine initializes the runtime system to perform a GET statement.
                          0000
                                         the get statement is compiled into code that sets up the parameters to
                          0000
                                         this routine, and then jsb's to it. this routine opens the file if necessary,
                                         allocates a buffer for the file, allocates and initializes a stream block for
                          0000
                                        the GET statement, processes any options specified in the GET statement and returns to the inline code.
                          0000
                          0000
                                   84
                          0000
                                   85
                                         following the jsb in the inline code, the compiler has generated code
                          0000
                                         that stores the address and size of the next element in rO and r1. the
                          0000
                                         inline code then jsb's to the routine in the pli$getedit or pli$getlist
                          0000
                                   88
                                        modules that processes elements of that data type.
                          0000
                                   89
                                   90
91
                          0000
                                         inputs:
                          0000
                                               ap - address of file control block
                                   92
93
                          0000
                                                (sp) - address of first element inline code
                          0000
                                               rO - address of skip option (number of skips)
                          0000
                                               r1 - address of the compiled format (getedit) or 0 (getlist)
                                               r2 - no_echo 0=off
r3 - no_filter_0=off
                                   95
                          0000
                                   96
97
                          0000
                          0000
                                               r4 - address of prompt
                          0000
                                   98
                                               r5 - purge_type_ahead 0=off
                          0000
                                   99
                                        outputs:
                          0000
                                  100
                                               r11 - address of the stream block for this get statement
                          0000
                                  101
                                         side effects:
                          0000
                                  102
                                               ap is preserved
                                               r0-r6 are destroyed
                          0000
                                  103
                          0000
                                 104
                          0000
                                 105
                                                .enabl lsb
                          0000
                                  106
                          0000
                                  107
                                      pli$getfile_r6::
                          0000
                                  108
                          0000
                                  109
                                      ; open file if nec
                          0000
                                 110
                          0000
                     7D
E0
                                  111
                                                        r0,-(sp)
                                                                                    ;save skip and format
                                               MOVQ
   1E OC AC
                                 112
113
                                               bbs
                                                        #atr_v_opened,fcb_l_attr(ap),10$ ;if file open, cont
     00000840
               8F
                     DD
                          0008
                                                        #<atr_m_stream+atr_m_input> ;request stream and input
                                               pushl
                     DD
                          000E
                                  114
                                               pushl
                                                                                    ;set fcb
                                                        #2,g^pli$open
0000000 GF
                     FB
                          0010
                                  115
                                               calls
                                                                                    open the file;
   OA OC AC
                                                        #atr_v_opened.fcb_l_attr(ap).10$; if file opened, cont
#plis_open.r0 ; set open failure
                     ΕO
                          0017
                                  116
                                               bbs
     000000018F
                     00
31
                          001¢
0023
                                  117
                                               movl
             0191
                                  118
                                               PLM
                                                                                    ;and fail
                          0026
                                  119
                                      ; check file attributes
                                  121
122
123
                          0026
   0A 0C AC
                          0026
                     E3
                                               bbcs
                                                        #atr_v_recur,fcb_l_attr(ap),20$ ;if illegal recursion
                          002B
0032
0035
     0000000018F
                     DO
31
                                                        #pli$_recursio,r0
                                                                                    ;set recursive i7o
                                               movl
                                  124
125
             0182
                                               prw
                                                        fail
                                                                                    ;and fail
                     9É
                                                        fcb_l_condit(ap),(fp) ;set condition handler address
#atr_v_input,fcb_l_attr(ap),40$;if input, cont
    6D
          OTAE CC
                                      205:
                                               movab
                                  126
127
128
129
   OA OC AC
                     ΕO
                          003A
                                               bbs
     00000000 * 8 ř
                     DO
31
                                      30$:
                          003F
                                                        #pli5_notinput.ru
                                               movi
                                                                                    ;set not input fi'e
                                                        fail ; and fail #atr_v_stream, fcb_l_attr(ap),50$; if stream, cont
                          0046
             016E
                                               PLM
   OA OC AC
                     E 0
                          0049
                                      405:
                                               bbs
     00000000 * 8F
                                  130
                          004E
                                                        #pli5_notstream,r0
                                                                                    ;set not stream file
                                               movi
```

PS SA

Ph

In Coay

Ps Cr As

Th 35 Th

20 22

Ma --

-\$ T0

Th

MA

```
015F
                             31
                                                                                                        :and fail
                                                             brw
                                                                        fail
                                   0058
                                                 ; allocate buffer if needed
                                            134 :
135 50$:
136
137
                                                                       fcb_l_buf(ap)
80$
                                   0058
                   14 AC
                                                                                                        :buffer already allocated?
                                                             tstl
                             12
                                   005B
                                                                                                        ; if neq, yes, cont
                                                             bnea
                                                                       #atr v app comma, fcb l attr(ap), 60$; if append comma
fcb w linesize(ap); add 1 to buffer size
fcb w linesize(ap), -(sp); get size of a line
                             ΕĪ
        03 OC AC
                                   005D
                                                             bbc
                  SA AC
                             B6
30
                                  0062
0065
                                                             incw
                                            139 60$:
                                                             movzwi
         0082 CC
                                                                        (sp), <fcb_b_rab+rab$w_usz>(ap) ;set it in rab
                       6E
                             B0
                                   0069
                                            140
                                                             MOVW
                             DD
                                   006E
                                            141
                                                                                                        :push addr of temp
                                                             pushl
                                            142
                             DF
                                   0070
                                                                                                        push addr of size
                                                             pushal
                                                                       #2,g^lib$get_vm
r0,70$
                                                                                                        ;get buffer
    00000000 GF
                             FB
                                   0073
                                                             calls
                             E8
                                   007A
                                            144
                   0A 50
                                                                                                        ; if lbs, then cont
                                                             blbs
                             DÖ
31
          00000000 8F
                                            145
                                   007D
                                                                        #pli$_novirmem,r0
                                                                                                        ;set no virt mem
                                                             movi
                                            146
                    0130
                                   0084
                                                             brw
                                                                        fail
                                                                                                        :and fail
                       50
50
50
                                            147 70$:
                           8ED0
                                   0087
                                                                        r0
                                                                                                        get buffer addr
                                                             popl
                                                                       r0,fcb_l_buf(ap) ;store addr of buffer in r0,fcb_l_buf_pt(ap) ;init buf pointer r0,fcb_l_buf_end(ap) ;init buf end r0,<fcb_b_rab+rab$l_ubf>(ap) ;store in rab too.
                                                                                                        ; store addr of buffer in fcb
            14 AC
                             00
                                   008A
                                            148
                                                             movi
            1C AC
                             DO
                                   008E
                                            149
                                                             movl
                       50
50
            18 AC
                             00
                                   0092
                                            150
                                                             movl
         0086 CC
                             D0
                                   0096
                                            151
                                                             movl
                                   009B
                                            152
                                            153
                                   009B
                                                 ; set locate mode if not app_comma
                                   009B
                                            154
                                                                       #rab$m_loc,<fcb_b_rab+rab$l_rop>(ap) ;clear locate mode
#atr_v_app_comma,fcb_l_attr(ap),90$ ;if not app_comma, cont
                                            155 80$:
          00010000 8F
                                   009B
66 AC
                             CA
                                                             bicl
        08 OC AC
                             E1
                                   00A3
                                            156
                                                             bbc
          00010000 8F
                             63
                                   8A00
                                            157
                                                                        #rab$m_loc,<fcb_b_rab+rab$l_rop>(ap) ;set locate mode
                                                             bisl
66 AC
                                   0080
                                            158
                                   00B0
                                            159
                                                 ;allocate a stream block
                                   00B0
                                            160
                                                 90$:
                50
                             7D
                      8E
                                   0080
                                            161
                                                                        (sp)+,r0
                                                                                                        ;restore skip and format
                                                             DVOM
                       56 8ED0
                                            162
163
                                   00B3
                                                             popl
                                                                        r6
                                                                                                        ;save return address
                                                                       #str_c_len,sp ;alloc space for stream block
sp,r11 ;set address of stream block
str_l_stack_end(r11),str_l_fld_end(r11);set end of field
          00000C08 8F
                             C2
                                   0086
                                                             subl
    5E
                             D0
                                   OOBD
                                            164
                5B
                                                             movl
                0408 CB
     14 AB
                             9E
                                   0000
                                            165
                                                             movab
                                   9006
                                            166
                                   0006
                                            167; initialize format stack
                                            168;
                                   0006
                                                                       fp,str_l_parent(r11)
r1,str_l_fp(r11)
95$
                      5D
51
                             D0
            08 AB
                                   9006
                                            169
                                                                                                        ;set default parent pointer
                                                             movl
                                             170
                                                                                                        ;set address of format pointer
            04 AB
                             D0
                                   00CA
                                                             movl
                                             171
                             13
                       04
                                   00CE
                                                                                                         ; if eql, cont
                                                             beal
                                                                       OC AC
                       04
                             CA
                                   00D0
                                                             bicl
                                             173 95$:
                       51
                             D0
         0C04 CB
                                   00D4
                                                             movl
             0C04 CB
                              9E
                                   00D9
                                             174
                                                             movab
                                             175
                              D4
                                   OODE
                   OC AB
                                                             clrl
                                            176;
                                   00E1
                                            177; set all options except prompt and skip
                                   00E1
                                             178
                                   00E1
                                                                       <fcb b rab+rab$l rop>(ap),r1 ;get addr of rop
#^c<rab$m_cco!rab$m_eof! - ;clear unused bits in rop
rab$m_pmt!rab$m_pta!rab$m_rah! - ;
rab$m_rne!rab$m_rnf!rab$m_wbh>,(r1) ;
r2,#rab$v_rne,#T,(r1) ;set read no echo
r3,#rab$v_rnf,#1,(r1) ;set read no filter
r5,#rab$v_nta,#1,(r1) ;set nurse type ahead
                                             179
           51 66 AC
16FFF8FF 8F
                                   00E1
                                                             movab
                                   00E5
                                             180
                                                             bicl
                                   00EC
                                             181
                                             182
                                   00EC
                       52
53
55
                                             183
                                   00EC
                18
                              F<sub>0</sub>
                                                             insv
         Ŏi
Oi
                1B
                              FŎ
                                   00F1
                                             184
  61
                                                             insv
                              FŎ
                                   00F6
                                             185
                                                                        r5,#rab$v_pta,#1,(r1) ;set purge type ahead
                1D
                                                             insv
                                   OOFB
                                                    process skip and prompt options. skips turn into a read with prompt where
                                   00fB
```

- pl1 runtime get file

PL

Ta

```
; the prompt is a <cr><lf>. if a positive number, n, skips was specified, we ; will do n-1 skips before we do the user specified prompt (if any). this re-
                                   OOFB
                                   00FB
                                            190
                                                    quires us to append the users prompt to the <cr><lf> for the last skip. if
                                            191 ;
                                   00FB
                                                    no skip was specified, but a prompt was specified, we will use the users
                                            192
                                   OOFB
                                                 ; prompt as is. note that prompting always forces a get, so that whatever is ; left in the buffer from the last get statement is lost.
                                   00FB
                                   00FB
                                            194 :
                                            195
                                   00FB
                                   00FB
18 AB
          00000A0D 8F
                                            196 100$:
                                                                       #^x0a0d,str_b_field(r11) ;set to prompt with <cr><lf>
                                                            movl
                                                                       #2,<fcb_b_rab+rab$b_psz>(ap) ;set size in rab
str_b_field(r11),<fcb_b_rab+ - ;set prompt addr
rab$l_pbf>(ap) ;in rab
         0096 CC
                             90
                                   0103
                                            197
                                                            movb
                             9Ē
                                  0108
                                            198
     0092 CC
                 18 AB
                                                            movab
                                            199
                                                                       rab$l_pbf>(ap)
#rab$m_pmt,<fcb_b_rab+rab$l_rop>(ap) ;set to prompt in rab
                                   010E
                                   010E
                                             200
          40000000 8F
                             83
66 AC
                                                            bisl
                                                                       r0.r2
                52
                                   0116
                                             201
                       50
                             D0
                                                                                                       copy skip addr
                                                            movl
                                   0119
                                             202
                                                                                                        ; if eql, then no skip
                                                            begl
                                            203
                                                                       (r2),r2
                             32
                                   011B
                                                                                                        ;get number to skip
                52
                       62
                                                            cvtwl
                                                                                                        if gtr, cont
                             14
                                   011E
                                             204
                                                                       110$
                                                            bgtr
          00000000'8F
                             D0
                                   0120
                                             205
                                                                       #pli$_invskip,r0
                                                                                                        set invalid skip
                                                            movl
                    008D
                             31
                                   0127
                                             206
                                                            brw
                                                                       fail
                                                                                                        and fail:
                                            207 1105:
        02 OC AC
                             E1
                                   012A
                                                                       #atr_v_virgin,fcb_l_attr(ap),115$ ;if virgin
                                                            bbc
                             D6
                                   012F
                                             208
                                                                                                        ;do an extra skip to get first record
                                                             incl
                                            209 115$:
210
211
          00040000 8F
                             CA
                                   0131
OC AC
                                                            bicl
                                                                       #atr_m_currec,fcb_l_attr(ap) ;clear currec in fcb to do skips
                             D5
                                   0139
                                                            tstl
                                                                                                        ;prompt specified?
                             13
                                   013B
                                                                       160$
                                                                                                        ; if eql, then not there, cont
                       55
                                                            begl
                                                                                                       get length
                             3C
13
                                            212
213
                51
                                   013D
                       64
                                                                       (r4),r1
                                                            movzwl
                       50
                                   0140
                                                                                                        ; if eql, then ignore it
                                                                       160$
                                                            begl
                                            214
215
216
                                                                       r1,#253
                                   0142
    000000FD 8F
                       51
                             D1
                                                                                                        ; is it too big?
                                                            cmpl
                                                                       120$
                             15
                                   0149
                                                            blea
                                                                                                       ; if leq, no, cont
          0000000°8F
                                   014B
                             ĎΟ
                                                            movl
                                                                       #pli$_promptobig,r0
                                                                                                        ;set prompt too big
                             31
                                   0152
                    0062
                                             217
                                                                                                        and fail
                                                            brw
                                                                       fail
                                            218 120$:
219
220
221
222
223
                       52
                             DD
                                   0155
                                                            pushl
                                                                                                        save number of skips
                                                                       r1,str_l_fld_pt(r11) ;save size of prompt (r4)+,(r4),str_b_field+2(r11);copy prompt to field
            10 AB
                      51
                             DO
                                   0157
                                                            movl
                64
                       84
                             28
                                   015B
     1A AB
                                                            movc3
                       52
                          8ED0
                                   0160
                                                                                                        restore number of skips
                                                            popl
                                                                       ; if gtr, do n-1 with our prompt str b_field+2(r11),<fcb_b_rab+ - ; no skips, so set his prompt rab$[_pbf>(ap) ; addr in rab str_l_fld_pt(r11),<fcb_b_rab+ - ; set size of users prompt
                                   0163
                       19
                             14
                                                            batr
                                  0165
     0092 CC
                             9E
                  1A AB
                                                            movab
                                            224
225
                                   016B
                                   016B
                             90
     0096 CC
                  10 AB
                                                            movb
                                   0171
                                             226
                                                                                                        ;in rab
                                                                       rab$b_psz>(ap)
                                   0171
                                                                       150$
                                                                                                        do the prompt
                                                            brb
                                                                       #atr_v_eof,fcb_l_attr(ap),170$ ;if eof, signal endfile
g^pli$$get_rec ;skip a record
                                   0173
                                            228 130$: 229
        33 OC AC
                      00
                             ΕO
                                                            bbs
          00000000 GF
                             16
                                   0178
                                                             ·-b
                             F 5
                                   017E
                  F2 52
                                             230 140$:
                                                            sobgtr
                                                                       ř2,130$
                                                                                                        ; if skips left, do them
                                                                       str l fld pt(r11), <fcb b rab+ - ;add size of users prompt rab$b psz>(ap) ; to prompt size in rab
Watr v eof, fcb l attr(ap), 175$ ; if eof, signal endfile
g^pli$$get_rec ;skip a record
r2,150$ ;process skips
                                            231
232
     0096 CC
                                   0181
                                                            addb
                   10 AB
                             80
                                   0187
                                            232
233 150$:
234
235 160$:
236
237
238
239
240 : 'ref
241 :
                                   0187
        1F OC AC
                                                            bbs
          00000000 GF
                                   0180
                              16
                                                            jsb
                                   0192
                      52
                             F 4
                                                            sobgeq
                                                                       #rab$m_pmt,<fcb_b_rab+rab$l_rop>(ap) :clear prompt in rab
#atr_m_currec,fcb_l_attr(ap) ;set currec to turn off skipping
           40000000 8F
                             CA
                                   0195
                                                            bicl
66 AC
                             Ĉ8
                                   019D
0C AC
           00040000 8F
                                                            bisl
                                   01A5
            OC AC
                      08
                             CA
                                                                       #atr_m_recur,fcb_l_attr(ap) ; clr recursive flag
                                                            bicl
                                   01A9
                                                    'return' jump back to main line code
                                   01A9
                                   01A9
                                   01A9
                             17
                                                                       (r6)
                       66
                                                             jmp
                                                                                                       return to user
                                   01AB
                                            244 170$:
                                   01AB
                                                            pushl
                       50
                             DD
                                                                       ap
                                                                                                       ;set fcb addr
```

00000000 00 0A	DD DD 11	01AD 01AF 01B5	245 246 247 248 :	pushl pushl brb	#0 #pli\$_endfile 180\$	<pre>;set no error code ;set endfile condition ;signal the condition</pre>
000000000	DD DD DD D4 AA F04	87 0187 0187 0187 0189 0188 0101 0107 0107 0107 0107	249 ; failu 250 ; 251 ; 252 fail: 253 ; 254 ; 255 180\$: 256 ; 257 ; 258 ; 260 ; 261	pushl pushl clrl bicw calls ret .dsabl .end	ap rO #pli\$_error (fp) #1@atr_v_recur,fcb_l_at #3,g^pli\$io_error	;set fcb addr ;set error code ;set error condition ;remove the handler in this frame :tr(ap);reset ;signal the error ;return

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- pl1 runtime get file

16-SEP-1984 02:20:03 VAX/VMS Macro V04-00 6-SEP-1984 11:38:23 [PLIRTL.SRC]F\_IGETFIL.MAR;1 **8** (1) Page

Psect synopsis!

PSECT name Allocation PSECT No. Attributes ABS 00000000 0.) 00 ( 0.) NOPIC NOWRT NOVEC BYTE USR LCL NOSHR NOEXE NORD CON SABSS FFFFFFC 0.) 01 ( NOPIC USR CON ABS 1.) LCL NOSHR EXE RD WRT NOVEC BYTE \_PL1\$CODE 000001CF CON 463.) USR SHR NOWRT NOVEC LONG EXE RD

Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
		*****	
Initialization	9	00:00:00.04	00:00:00.82
Command processing	67	00.00:00.52	00:00:03.00
Pass 1	214	00:00:07.26	00:00:21.15
Symbol table sort	0 57	00:00:00.82	00:00:02.14
Pass 2	57	00:00:01.36	00:00:04.71
Symbol table output	11	00:00:00.09	00:00:00.11
Psect synopsis output	2	00:00:00.03	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	360	00:00:10.13	00:00:31.96

The working set limit was 1050 pages.
39656 bytes (78 pages) of virtual memory were used to buffer the intermediate code.
There were 40 pages of symbol table space allocated to hold 712 non-local and 20 local symbols.
261 source lines were read in Pass 1, producing 11 object records in Pass 2.
17 pages of virtual memory were used to define 15 macros.

Macro library statistics !

12

Macro library name Macros defined \$255\$DUA28:[PLIRTL.OBJ]PLIRTMAC.MLB;1 \$255\$DUA28:[SYSLIB]STARLET.MLB;2 TOTALS (all libraries)

739 GETS were required to define 12 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=TRACEBACK/LIS=LIS\$:PLIGETFIL/OBJ=OBJ\$:PLIGETFIL MSRC\$:PLIGETFIL/UPDATE=(ENH\$:PLIGETFIL)+LIB\$:PLIRTM

0308 AH-BT13A-SE

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